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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,716	01/12/2004	Youn-Sun Kim	678-1337	2908

66547 7590 05/20/2008

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EXAMINER	
O'CONNOR, BRIAN T	

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
05/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/756,716	KIM ET AL.	
	Examiner	Art Unit	
	BRIAN T. O'CONNOR	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 7-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-18* is/are allowed.

6)☒ Claim(s) *1-4,7-14,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to applicant's amendment filed on 02/26/2008.

2. Claim 1 has been amended. Claims 5 and 6 have been cancelled. Claims 1-4 and 7-20 are currently pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 7-10, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 2002/0141349; hereafter Kim) in view of Gholmieh (US 2004/0147276) and further in view of Chung et al. (US 6,741,862; hereafter Chung).

With respect to claim 1, Kim discloses a method of controlling reverse data rates in a mobile communication system including mobile stations (MSs) for transmitting reverse data and changing reverse data rates based on rate control bits (RCBs) received from a base station (BS), and the BS for controlling the reverse data rate of the MSs (See section [0066], as well as title), the method comprising the steps of: generating dedicated RCBs indicating one of a rate increase and a rate decrease for individual MSs among the MSs and transmitting the dedicated RCBs to the individual MSs, respectively (section [0065], lines 9-20, as well as section [0112] to [0113], where

RCB is dedicated to individual mobile station and contain information on adjusting the data rate).

Kim does not teach generating a global RCB and using the total capacity of the BS to generate a rate command for the MS.

Gholmieh which is in the same field of endeavor (reverse link data rate control), teaches the step of generating a global RCB indicating one of a rate increase and a rate decrease to all of the MSs within the BS and transmitting the global RCB to the MSs (see section [0005], where base station transmit control bit to MS, which inherently has to generate the control bit before transmitting it).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a global with dedicated RCB in order to shorten time required to reach the full utilization of a reverse link in a mobile communication system supporting data transmission.

Chung, in an invention of setting reverse data rates by a base station, discloses that a BS need to send rate limit commands so that the BS is not overrun with frame errors (column 12, lines 9-13)

Chung teaches the advantage of transmitting data reliably (without excessive errors) on reverse channels by placing limits on data rate commands (column 2, lines 60-65). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Chung with the method of Kim.

With respect to claims 2 and 3, Kim further teaches RCBs are code-multiplexed prior to transmission. (See fig 4, items 46-48 and 44,as well as section

[0063]) and time - multiplexed (See section [0017], where HDR system used time slot, as well as section [0046], lines 10-13). Kim also disclose that the determinator generates RCB's (fig 3, item 34, as well as section [0046], lines 5-10) and a transmitter processor as part of a base station which in turn is a transmitter/receiver (fig 3, item 35, as well as section [0047], lines1-5) suitable for performing the above limitation.

With respect to claim 4, Kim fails to disclose mobile stations grouped into a number of groups and a different global RCB being transmitted to each group.

Chung, in an invention of setting reverse data rates by a base station, discloses that a base station will send a different limit to each mobile station in a particular sector or group (column 2, lines 58-65).

Chung teaches the advantage of transmitting data reliably (without excessive errors) on reverse channels by placing limits on data rate commands for each sector with mobile stations (column 2, lines 60-65). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Chung with the method of Kim.

With respect to claim 7, Kim discloses a method of controlling reverse data rates in a mobile communication system including mobile stations (MSs) for transmitting reverse data and changing reverse data rates based on rate control bits (RCBs) received from a base station (BS), and the BS for controlling the reverse data rate of the MSs (See section [0066], as well as title), the method comprising the steps of: generating dedicated RCBs indicating one of a rate increase and a rate decrease for individual MSs among the MSs and transmitting the dedicated RCBs to the individual

MSs, respectively (section [0065], lines 9-20, as well as section [0112] to [0113], where RCB is dedicated to individual mobile station and contain information on adjusting the data rate). Kim also discloses a determinator that generate RCBs (34 of Figure 3; paragraph [0046], lines 5-10) and a transmitter processor as part of a base station which in turn is a transmitter/receiver (35 of Figure 3; paragraph [0047], lines1-5)

Kim does not teach generating a global RCB and using the total capacity of the BS to generate a rate command for the MS.

Gholmieh which is in the same field of endeavor (reverse link data rate control), teaches the step of generating a global RCB indicating one of a rate increase and a rate decrease to all of the MSs within the BS and transmitting the global RCB to the MSs (see section [0005], where base station transmit control bit to MS, which inherently has to generate the control bit before transmitting it).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a global with dedicated RCB in order to shorten time required to reach the full utilization of a reverse link in a mobile communication system supporting data transmission.

Chung, in an invention of setting reverse data rates by a base station, discloses that a BS need to send rate limit commands so that the BS is not overrun with frame errors (column 12, lines 9-13)

Chung teaches the advantage of transmitting data reliably (without excessive errors) on reverse channels by placing limits on data rate commands (column 2, lines

60-65). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Chung with the method of Kim.

With respect to claims 8 and 10, Kim further teaches RCBs are code-multiplexed prior to transmission. (See fig 4, items 46-48 and 44,as well as section [0063]) and time - multiplexed (See section [0017], where HDR system used time slot, as well as section [0046], lines 10-13). Kim also disclose that the determinator generates RCB's (fig 3, item 34, as well as section [0046], lines 5-10) and a transmitter processor as part of a base station which in turn is a transmitter/receiver (fig 3, item 35, as well as section [0047], lines1-5) suitable for performing the above limitation.

With respect to claim 9, Kim further teaches transmitter (base station) includes a position controller for determining positions of the global RCB and the dedicated RCBs in time multiplexing. (See section [0063], where the determinator sets the position of the RCB different slot).

With respect to claim 19, Kim discloses teaches a method of controlling reverse data rates in a mobile communication system including mobile stations (MSs) for transmitting reverse data and changing reverse data rates based on a dedicated rate control bits (RCBs) received from a base station (BS), and the BS for controlling the reverse data rate of the MSs (See title, as well as section [0065], lines 17-20).

Kim further teaches increasing a maximum reverse data rate if the dedicated RCB indicates a rate increase; and decreasing the maximum reverse data rate if the dedicated RCB indicates a rate decrease. (See section [0113], as well as section

[0067], lines 1-4, also see abstract, last lines; where it is inherent that the maximum allowable adjustment is made).

Kim does not teach receiving a global RCB from the BS, and having a MS compare data rate control commands to increase or decease a reverse data rate.

Gholmieh teaches the step of generating a global RCB indicating one of a rate increase and a rate decrease to all of the MSs within the BS and transmitting the global RCB to the MSs (see section [0005], where base station transmit control bit to MS, which inherently has to generate the control bit before transmitting it).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a global with dedicated RCB in order to shorten time required to reach the full utilization of a reverse link in a mobile communication system supporting data transmission.

Chung, in an invention of setting reverse data rates by a base station, discloses a MS receiving several commanded rates and comparing the received commanded rates to set a maximum transmit rate (column 13, lines 20-30).

Chung teaches the advantage of further interference reduction on reverse channels by considering multiple data rate commands (Abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Chung with the method of Kim.

With respect to claim 20, Kim further teaches that the MS neglects the dedicated RCB if the dedicated RCB is not assigned for the MS. (See sections [0065],

where each MS only consider the dedicated RCB assigned to it exclusively, and disregard the other).

5. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Gholmieh and further in view of Chung and further in view of Moon et al (US 6,671,266; hereinafter Moon).

With respect to claim 11, Kim does not teach that the transmitter contains a power controller for setting the global RCB to a power enabling the global RCB to reach the MSs, and setting each of the dedicated RCBs to a power enabling the dedicated RCB to reach an individual MS corresponding to the dedicated RCB.

Moon, in the same field of endeavor (wireless communication system), teaches a transmitter (base station), which has a control power of the forward channel to adjust power to the level, required to reach the mobile station (See fig 6 as well as column 11, lines 36-49, where BS send message to MS at a specific power, if ACK message is not received, it increase the power)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust power to the level required to reach the mobile station to separately controlling the transmitting the power of channels in a CDMA communication system using orthogonal and quasi-orthogonal codes. (See column 2, lines 36-39).

With respect to claim 12, Kim discloses a dedicated RCB transmitter to transmit dedicated RCBs in a time multiplexing manner (35 of Figure 3).

Kim does not teach that the transmitter contains a power controller for setting the global RCB to a power enabling the global RCB to reach the MSs.

Moon, in the same field of endeavor (wireless communication system), teaches a transmitter (base station), which has a control power of the forward channel to adjust power to the level, required to reach the mobile station (See fig 6 as well as column 11, lines 36-49, where BS send message to MS at a specific power, if ACK message is not received, it increase the power)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust power to the level required to reach the mobile station to separately controlling the transmitting the power of channels in a CDMA communication system using orthogonal and quasi-orthogonal codes. (See column 2, lines 36-39).

With respect to claim 13, Kim further teaches a radio frequency transmitter (See fig 3, item A4) ,a gain controller for multiplying the global RCB by a gain to assign a power to the global RCB enabling the MSs to receive the global RCB (See fig 4, step 34-43, as well as section [0061]).

Kim does not teach a spreader for Walsh-spreading the gain-controlled global RCB and orthogonally scrambling the Walsh-spread global RCB;

Moon, which is in the same field of endeavor (wireless communication system), Teaches a spreader for Walsh-spreading the gain-controlled global RCB and orthogonally scrambling the Walsh-spread global RCB (See fig 1, as well as column 4, lines 19-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a spreader for Walsh-spreading the gain-controlled global RCB and orthogonally scrambling the Walsh-spread global RCB to separately

controlling the transmitting the power of channels in a CDMA communication system using orthogonal and quasi-orthogonal codes. (See column 2, lines 36-39).

With respect to claim 14, Kim further teaches that the global RCB transmitter further comprises a repeater for repeating the global RCB a predetermined number of times and outputting the repeated global RCBs to the gain controller (See fig 4, item 41, as well as section [0056], lines 6-9).

Allowable Subject Matter

6. Claims 15-18 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN T. O'CONNOR whose telephone number is (571)270-1081. The examiner can normally be reached on 9:00AM-6:30PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BTO/

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May 16, 2008
Patent Examiner

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